CLAIMS

1) A method of determining wear of composite material brake disks (5) of a road vehicle (1); the method comprising:

- calculating, at each deceleration of the vehicle (1), the kinetic energy differential (DEk) of the vehicle (1) induced by deceleration;

- determining, as a function of the kinetic energy differential (DEk) of the vehicle (1), an instantaneous value (Ed) of the energy dissipated by the brake disks (5) during deceleration;

- determining, on the basis of the value (Ed) of the energy dissipated by the brake disks (5) during deceleration, an instantaneous wear contribution (u) of the brake disks (5) during deceleration; and

- updating a total wear value (U) of the brake disks (5) by adding the instantaneous wear contribution (u) of the brake disks (5) during deceleration to the previous total wear value (U).

2) A method as claimed in Claim 1, wherein, upon deceleration of the vehicle (1), a corresponding instantaneous value (Ed) of the energy dissipated by the brake disks (5) during deceleration is only determined if the braking action of the brake system (4) of the vehicle (1) is actually used during deceleration.

3) A method as claimed in Claim 1, wherein, at each deceleration, an energy contribution caused by the

braking action of friction on the vehicle (1) is determined; the energy contribution caused by the braking action of friction on the vehicle (1) being taken into account to determine the instantaneous value (Ed) of the energy dissipated by the brake disks (5) during deceleration as a function of the kinetic energy differential (DEk) of the vehicle (1).

4) A method as claimed in Claim 1, wherein, at each deceleration, the temperature of the brake disks (5) during deceleration is determined; the instantaneous wear contribution (u) of the brake disks (5) during deceleration being determined on the basis of the value (Ed) of the energy dissipated by the brake disks (5) during deceleration, and on the basis of the determined temperature of the brake disks (5) during deceleration.

5) A method as claimed in Claim 4, wherein a mean value of the kinetic energy differential (DEk) of the vehicle (1) within a given time interval is determined; the temperature of the brake disks (5) during deceleration being determined as a function of the mean value of the kinetic energy differential (DEk).

6) A method as claimed in Claim 1, wherein a braking mode assessment is made at each deceleration; the instantaneous wear contribution (u) of the brake disks (5) during deceleration being determined on the basis of the value (Ed) of the energy dissipated by the brake disks (5) during deceleration, and on the basis of the braking mode assessment.

7) A method as claimed in Claim 6, wherein a mean value of the kinetic energy differential (DEk) of the vehicle (1) within a given time interval is determined; the braking mode assessment being determined as a function of the mean value of the kinetic energy differential (DEk).

8) A method as claimed in Claim 1, wherein the instantaneous value (Ed) of the energy dissipated by the brake disks (5) during deceleration is assumed equal to the kinetic energy differential (DEk) of the vehicle (1); the instantaneous wear contribution (u) of the brake disks (5) during deceleration being determined by multiplying the value (Ed) of the energy dissipated by the brake disks (5) during deceleration by a multiplication constant (K) ranging between (0) and (1).

9) A method as claimed in Claim 8, wherein a mean value of the kinetic energy differential (DEk) of the vehicle (1) within a given time interval is determined; the multiplication constant (K) assuming different values as a function of the mean value of the kinetic energy differential (DEk).

10) A method as claimed in Claim 8, wherein the multiplication constant (K) may assume two different values corresponding respectively to normal use of the vehicle (1) and extreme use of the vehicle (1).

11) A method as claimed in Claim 9, wherein the time interval in which to determine the mean value of the kinetic energy differential (DEk) of the vehicle (1)

ranges between 0,1 and 5 seconds.

12) A method as claimed in Claim 1, wherein the total wear value (U) of the brake disks (5) is divided between the front brake disks (5) and the rear brake disks (5) as a function of a constant distribution ratio.

13) A method as claimed in Claim 1, wherein the total wear value (U) of the brake disks (5) comprises a total wear value (Ua) of the front brake disks (5), and a total wear value (Up) of the rear brake disks (5); the instantaneous wear contribution (u) of the brake disks (5) during deceleration being divided between the two total values (Ua, Up) as a function of a variable distribution ratio.

14) A method as claimed in Claim 13, wherein the distribution ratio is calculated at each deceleration as a function of the initial and final speed values (V1, V2) of the deceleration.

15) A method as claimed in Claim 1, wherein a signal is generated when the total wear value (U) of the brake disks (5) exceeds a given threshold.

16) A device for determining wear of composite material brake disks (5) of a road vehicle (1), the device implementing the method as claimed in Claim 1.